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PATENT

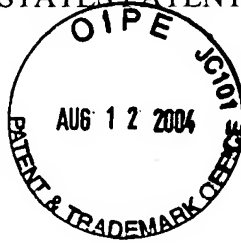
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ajit Singh Gill

Serial Number: 10/665,089

Filed: September 17, 2003

For: "Pipe Coupling"



Examiner: Aaron M. Dunwoody

Art Unit: 3679

Atty Docket No: 006-1-018

RESPONSE TO REQUIREMENT FOR ELECTION AND AMENDMENT

Mail Stop Non Fee Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria VA 22313-1450

Sir:

Responsive to the Requirement for election dated July 12, 2004, applicant hereby elects the claims of Group 4 directed to the species shown in Fig. 6. The claims that cover the species of Fig. 6 are Claims 13, 16, 17, 18, 20, and 21. Thus, these claims are the elected claims. Claims 1-12, 14, and 15 do not recite a gasket as shown in Fig. 6, but are broad enough to cover the species of Fig. 6, and thus generically cover the species of Fig. 6.

Applicant also amends paragraphs 24, 26, 27, and 28 of the specification to correct errors therein as follows:

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop FEE AMENDMENT; Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450, on this 9 day of August, 2004.

Signed:

Robert R. Mallinckrodt

Dated:

Aug. 9, 2004

[0024] FIGS. 3 and 5 and 6 show two ~~a~~ ended coupling couplings, and FIGS. ~~FIG.~~ 4 ~~show~~ shows ~~a two~~ a one ended coupling. In FIGS. ~~FIG.~~ 4 the one ended coupling is integrated either with a traditional pipe or with a hose shank. Whichever the case, the pipe or hose shank is shown by 14A.

[0026] Fig. ~~FIG.~~ 4 employs a diaphragm type of gasket seal, which will also be explained under FIGS. 7 and 8. Diaphragm seal 1 in FIG. 4 is a miniature seal of the same design as in FIGS. 7 and 8. Seal 1 is provided with openings 12 and 12A to pressurize the seal with fluid in the pipe line. The outer surface 21 of pipe 14 provides a seat for gasket 1. Through cavity 19 and openings 12 and 12A, fluid reaches internal cavities 13 and 13A, and pressurizes diaphragm seal 1, thus blocking the exit of fluid between 14 and 11. The lever jaws with their ~~wight~~ weight and power arms are not shown in FIG. 4. ~~The~~ FIG. 3 shows clearly groove G1 for the lever ~~Jaw~~ jaw weight arm, and the groove 22 constructed in the ring welded to the pipe or around the pipe.

[0027] In FIG. 5 shows the invented coupling holding two pipes 14 and 14A together. It also shows two seal gaskets mounted over rings, which rings may be welded to the ends of the pipes or mounted around the end portions of pipes. The power arms J8 are held in place against the end faces F1 and F2 by means of a frictional fit or by means of frictional ~~depression~~ depressions provided in said faces F1 and F2. The triangular seals 47 and 47A depicted by their sides 50, 51, 52 and 50A, 51A, 52A, respectively, are mounted in corresponding triangular grooves. The seal may be a solid seal or it may be provided with a hollow interior which can be energized by the fluid in the pipe line. The fluid in cavities 53 and 53A ~~notward~~ exert pressure outwardly toward the coupling body and the fluid provided by the gap G ~~pushed~~ pushes the seals outward parallel to the axis of the pipe. Thus the resultant force is such that it seals the ~~fluid~~ fluid. The power jaws J8 (shown in FIG. 2) can be pried out by pushing a tool between the arm J8 and pipe.

[0028] The coupling shown in the FIG. 6 is the same coupling as shown in FIG. 3. The dotted pipes 14 and 14A are merely indicative of pipes which the coupling would hold together. In FIG. 6 during the push of the two pipes 14 and 14A, the original "U" type of gasket 47 is deformed. The seal 47 is partially located in the inner coupling body and partially between the opposite ends of pipes between slanting ends 16 and 16A. In FIG. 5 6, gasket seal 47 is located in the corresponding cavity 52 created by the pipes 14 and 14A and the coupling C. The two arms of 47 are shown by 48 and 49. Fluid enters cavity 52, through gap G between pipes, and pressurizes the gasket. The original flare of the gasket, between arms 48 and 49, is reduced by slants 51 and 51A, when the pipes are pushed into the receiving openings of the coupling, during mounting.